

REMARKS

Applicants respectfully request reconsideration and withdrawal of the outstanding Office Action rejections in view of the following remarks.

Rejections under 35 USC § 103(a)

Claims 6 and 8-31 stand rejected under 35 U.S.C. 103(a) as being obvious over Oberdorf et al (USP 6,114,342) in view of Jempty et al (J. Org. Chem. 1981, Vol. 46, 4545-4551) and Moody et al. (Synlett. 1999, No. 10, 1575-1576). Applicants respectfully submit that the combination of these documents cannot render obvious the present claims.

Oberdorf discloses phenylacetic acid derivatives and their use for controlling harmful fungi and animal pests. Oberdorf does not disclose the use of an indium or iron based catalyst, as required in the instant claim 6. Furthermore, Oberdorf does not teach or suggest the use of HCl as in the present claims. Oberdorf has been further characterized in Applicants' response to the July 10, 2007 Office Action (see pp. 8-9). As discussed in detail in that response, Applicants submit that Oberdorf does not disclose each and every element of the claims.

Jempty discloses using iron chloride supported on silica gel as a means for ether cleavage. The disclosure of Jempty states that the silica supported iron chloride is used in a 1.1 molar ratio versus the starting materials. Specifically, in the left column of Jempty page 4548 just above the formulae, it explicitly states that only 1.1 equiv of FeCl_3 (which is a Lewis acid) results in excellent yields, and that 0.5 equiv only gave a

43% yield. This alone would teach the skilled artisan away from using a catalytic amount (which is a lot less than 0.5 equiv), because he would have to believe that a further decrease in the amount of FeCl_3 would lead to even smaller yields. Note, that the use of slightly less than half the amount of Lewis acid also results in slightly less than half the yield, thus strongly suggesting a direct dependence of yield on the amount of Lewis acid used.

In the right column of Jemtpy page 4548 below the formulae, it is described that the reaction depends on such high amounts of FeCl_3 because a chelation takes place, in other words a complex is formed. The skilled artisan reading this would immediately think of a Friedel-Crafts-Acylation type of reaction which also needs (above) stoichiometric amounts of a Lewis acid, because a complex is formed. Thus this passage also teaches away from using less than stoichiometric amounts. This passage is in perfect harmony with the above noted yield/amount of Lewis acid dependency.

Jemtpy shows a combined reagent consisting of FeCl_3 and SiO_2 . According to Jemtpy in Table IV neither FeCl_3 nor SiO_2 alone would result in acceptable yields. This clearly teaches away from using FeCl_3 as a reagent on its own – let alone in catalytic amounts.

In the left column of page 4549, Jemtpy further illustrates that the reagent has to have high surface area silicates as an integral part – charcoal, alumina or molecular sieves would not work as proven by Table V. This is further proof that FeCl_3 is not the reagent species of Jemtpy, but only a part of it, further teaching away from its use as sole reagent, let alone in catalytic amounts.

Thus the skilled artisan regarding Jempty would never have considered using FeCl_3 in a catalytic amount for a reaction such as that which is the object of the instant claims, because the Jempty reference absolutely teaches away from doing that.

Therefore, one of skill in the art who combined the disclosures of Oberdorf and Jempty would not arrive at either indium or iron catalysts as required by present claim 6. Applicants submit that the disclosure of Jempty does not cure the deficiencies of Oberdorf because a combination of the two disclosures would lead to the use of chlorides in stoichiometric amounts. Neither document teaches or suggests the use of catalytic amounts.

Moody teaches the use of indium metal as a reducing agent in the cleavage of benzyl ethers. Moody is silent with respect to any mention of the indium being used in a catalytic manner.

According to Moody, the benzylic C-O bond of the 4-nitrobenzyl ether is cleaved. To illustrate which bond this is, please see the formula below, where the bond that is cleaved according to Moody is crossed with a dashed line.



This bond is cleaved because of the nitro group. The nitro group activates the benzylic carbon, so that this cleavage is made possible. Such a benzylic C-O bond in para-position to a nitro group is, however, not possible according to the instant invention, which could only result in a phenolic C-O bond, where the oxygen is directly bonded to the aromatic ring – see formula II of the present specification). Other benzylic C-O bonds – which are not in para-position to a nitro group – are not cleaved according to Moody – see the already mentioned passage below the table “ ... benzyl ethers remained intact, demonstrating the selectivity of the reaction.” This clearly illustrates that only such benzylic bonds which are in para-position to a nitro group are cleaved according to Moody – thus clearly teaching away from trying to use Indium for the cleavage of other benzylic groups (for example such as which are to be cleaved in the instant invention). Therefore, the disclosure of Moody does not cure the deficiencies of Oberdorf or Jempty, either alone or in combination with each other.

Applicants submit that the present claims are not rendered obvious by the combination of Oberdorf, Jempty and Moody. For these reasons, Applicants respectfully request reconsideration and withdrawal of the outstanding Office Action rejection. Early and favorable action is awaited.

Respectfully submitted,

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